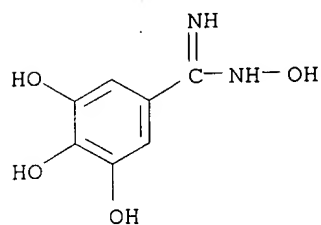
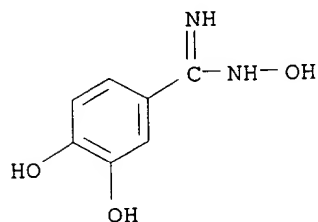


L2 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2000 ACS  
RN 95933-74-7 REGISTRY  
CN Benzenecarboximidamide, N,3,4,5-tetrahydroxy- (9CI) (CA INDEX NAME)  
OTHER NAMES:  
CN N,3,4,5-Tetrahydroxybenzimidamide  
CN **Trimidox**  
CN VF 233  
FS 3D CONCORD  
MF C7 H8 N2 O4  
CI COM  
LC STN Files: ADISINSIGHT, BIOBUSINESS, BIOSIS, CA, CAPLUS, DRUGUPDATES,  
IPA, PHAR, PROMT, TOXLINE, TOXLIT, USPATFULL



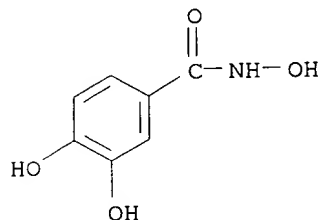
23 REFERENCES IN FILE CA (1967 TO DATE)  
23 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L6 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2000 ACS  
RN 95933-72-5 REGISTRY  
CN Benzenecarboximidamide, N,3,4-trihydroxy- (9CI) (CA INDEX NAME)  
OTHER NAMES:  
CN **Amidox**  
CN VF 236  
FS 3D CONCORD  
DR 125199-74-8  
MF C7 H8 N2 O3  
CI COM  
LC STN Files: ADISINSIGHT, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO, CA,  
CANCERLIT, CAPLUS, DDFU, DRUGPAT, DRUGU, DRUGUPDATES, EMBASE, IPA,  
MEDLINE, PHAR, TOXLINE, TOXLIT, USPATFULL



15 REFERENCES IN FILE CA (1967 TO DATE)  
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
15 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L3 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2000 ACS  
 RN 69839-83-4 REGISTRY  
 CN Benzamide, N,3,4-trihydroxy- (9CI) (CA INDEX NAME)  
 OTHER NAMES:  
 CN 3,4-Dihydroxybenzohydroxamic acid  
 CN 3,4-Dihydroxyphenylhydroxamic acid  
 CN **Didox**  
 CN N,3,4-Trihydroxybenzamide  
 CN NSC 324360  
 CN VF 147  
 FS 3D CONCORD  
 DR 106573-41-5  
 MF C7 H7 N O4  
 CI COM  
 LC STN Files: ADISINSIGHT, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS,  
 BIOTECHNO, CA, CANCERLIT, CAPLUS, CIN, DDFU, DRUGNL, DRUGU,  
 DRUGUPDATES,  
 EMBASE, IPA, MEDLINE, PHAR, PROMT, RTECS\*, TOXLINE, TOXLIT, USPATFULL  
 (\*File contains numerically searchable property data)



51 REFERENCES IN FILE CA (1967 TO DATE)  
 1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 51 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L6 ANSWER 1 OF 4 HCAPLUS COPYRIGHT 2000 ACS  
 AN 1999:228730 HCAPLUS  
 DN 131:57143  
 TI Nitric Oxide Up-regulates the Expression of Intercellular Adhesion Molecule-1 on Cancer Cells  
 AU Toyoshima, Takahiko; Kamijo, Ryutaro; Takizawa, Kunio; Sumitani, Kaname; Hatori, Masashi; Nagumo, Masao  
 CS Second Department of Oral and Maxillofacial Surgery, School of Dentistry, Showa University, Tokyo, 145-8515, Japan  
 SO Biochem. Biophys. Res. Commun. (1999), 257(2), 395-399  
 CODEN: BBRC99; ISSN: 0006-291X  
 PB Academic Press  
 DT Journal  
 LA English  
 CC 14-1 (Mammalian Pathological Biochemistry)  
 Section cross-reference(s): 2, 3  
 AB Nitric oxide (NO) is an unstable **free radical** that functions as a cytotoxic agent secreted by macrophages to kill **cancer** cells. Here we report the effect of NO on the expression of intercellular adhesion mol.-1 (ICAM-1) on **cancer** cells. NO donors such as SNP, SNAP and SIN-1 up-regulated the expression of ICAM-1 on NA cells, a squamous cell carcinoma cell line. Northern blot anal. showed that the induction of ICAM-1 might be due to transcriptional induction of ICAM-1 mRNA. Up-regulation of ICAM-1 mRNA by NO donors was **inhibited** by carboxy-PTIO, a NO scavenger. Although **NF-.kappa.B** activity was induced by NO donors, AP-1 was not induced by them. Staurosporin, a protein kinase C (PKC) **inhibitor**, **inhibited** the induction of ICAM-1 on NA cells by NO, whereas genistein, a protein tyrosine kinase **inhibitor**, did not. These findings indicate that NO up-regulates ICAM-1 expression on **cancer** cells by a regulatory mechanism involving PKC and suggest that **NF-.kappa.B**, but not AP-1, might be involved in induction of ICAM-1 by NO in **cancer** cells.  
 (c) 1999 Academic Press.  
 ST nitric oxide ICAM1 squamous cell carcinoma NFkappaB  
 IT Cell adhesion molecules  
 RL: BOC (Biological occurrence); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); OCCU (Occurrence) (ICAM-1 (intercellular adhesion mol. 1); nitric oxide regulation of ICAM-1 expression in human tongue squamous cell carcinoma cells)  
 IT Transcription factors  
 RL: BPR (Biological process); BIOL (Biological study); PROC (Process) (NF-.kappa.B (nuclear factor .kappa.B); nitric oxide regulation of ICAM-1 expression in human tongue squamous cell carcinoma cells)  
 IT Tongue  
 (squamous cell carcinoma; nitric oxide regulation of ICAM-1 expression in human tongue squamous cell carcinoma cells)  
 IT 10102-43-9, Nitric oxide, biological studies  
 RL: BAC (Biological activity or effector, except adverse); BIOL (Biological study)  
 (nitric oxide regulation of ICAM-1 expression in human tongue squamous cell carcinoma cells)  
 IT 141436-78-4, Protein kinase C  
 RL: BPR (Biological process); BIOL (Biological study); PROC (Process)  
 (nitric oxide regulation of ICAM-1 expression in human tongue squamous cell carcinoma cells)  
 RE.CNT 24  
 RE

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L6 ANSWER 2 OF 4 HCAPLUS COPYRIGHT 2000 ACS

AN 1998:441049 HCAPLUS

DN 129:183931

TI In vivo inhibition of nitric oxide synthase gene expression by curcumin,  
a

cancer preventive natural product with anti-inflammatory properties  
AU Chan, Marion Man-Ying; Huang, Hsing-I.; Fenton, Marilyn Ruth; Fong, Dunne  
CS Department of Biomedical Sciences, Pennsylvania College of Podiatric  
Medicine, Philadelphia, PA, 19107, USA

SO Biochem. Pharmacol. (1998), 55(12), 1955-1962

CODEN: BCPCA6; ISSN: 0006-2952

PB Elsevier Science Inc.

DT Journal

LA English

CC 1-6 (Pharmacology)

Section cross-reference(s): 18

AB Curcumin is a naturally occurring, dietary polyphenolic phytochem. that  
is

under preclin. trial evaluation for **cancer** preventive drug  
development and whose working pharmacol. actions include  
anti-inflammation. With respect to inflammation, in vitro, it  
**inhibits** the activation of **free radical**  
-activated transcription factors, such as nuclear factor .kappa.B (  
**NF.kappa.B**) and AP-1, and reduces the prodn.  
of pro-inflammatory cytokines such as tumor necrosis factor-.alpha.  
(TNF.alpha.), interleukin-1.beta. (IL-1.beta.), and interleukin-8.  
Inducible nitric oxide synthase (iNOS) is an inflammation-induced enzyme  
that catalyzes the prodn. of nitric oxide (NO), a mol. that may lead to  
carcinogenesis. Here, it is reported that in ex vivo cultured BALB/c

mouse

peritoneal macrophages, 1-20 .mu.M of curcumin reduced the prodn. of iNOS  
mRNA in a concn.-dependent manner. Furthermore, the authors demonstrated  
that, in vivo, two oral treatments of 0.5 mL of a 10-.mu.M soln. of  
curcumin (92 ng/g of body wt.) reduced iNOS mRNA expression in the livers  
of lipopolysaccharide(LPS)-injected mice by 50-70%. Although many hold  
that curcumin needs to be given at dosages that are unattainable through  
diet to produce an in vivo effect, we were able to obtain potency at  
nanomoles per g of body wt. This efficacy is assocd. with two  
modifications in our prepn. and feeding regimen: 1) an aq. soln. of  
curcumin was prepd. by initially dissolving the compd. in 0.5 N NaOH and

then immediately dilg. it in PBS; and 2) mice were fed curcumin at dusk after fasting. **Inhibition** was not obsd. in mice that were fed ad lib., suggesting that food intake may interfere with the absorption of curcumin.

ST curcumin nitric oxide synthase gene anticancer; NO synthase gene expression curcumin carcinogenesis

IT Polyphenols (nonpolymeric)

RL: BAC (Biological activity or effector, except adverse); FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (dietary phytochem; inhibition of nitric oxide synthase gene

expression

by curcumin, a cancer preventive natural product with anti-inflammatory properties)

IT mRNA

RL: BPR (Biological process); BIOL (Biological study); PROC (Process) (for iNOS; inhibition of nitric oxide synthase gene expression by curcumin, a cancer preventive natural product with anti-inflammatory properties)

IT Absorption

Anti-inflammatory drugs

Antitumor agents

Food

Gene expression

Peritoneal macrophage

Transformation (neoplastic)

(inhibition of nitric oxide synthase gene expression by curcumin, a cancer preventive natural product with anti-inflammatory properties)

IT Natural products

RL: BAC (Biological activity or effector, except adverse); FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (inhibition of nitric oxide synthase gene expression by curcumin, a cancer preventive natural product with anti-inflammatory properties)

IT 458-37-7, Curcumin

RL: BAC (Biological activity or effector, except adverse); BPR

(Biological

process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

(inhibition of nitric oxide synthase gene expression by curcumin, a cancer preventive natural product with anti-inflammatory properties)

IT 10102-43-9, Nitric oxide, biological studies 125978-95-2, Nitric oxide synthase

RL: BPR (Biological process); BIOL (Biological study); PROC (Process) (inhibition of nitric oxide synthase gene expression by curcumin, a cancer preventive natural product with anti-inflammatory properties)

L6 ANSWER 3 OF 4 BIOSIS COPYRIGHT 2000 BIOSIS

DUPLICATE 1

AN 1996:465207 BIOSIS

DN PREV199699187563

TI Redox regulation of transcriptional activators.

AU Sun, Yi (1); Oberley, Larry W.

CS (1) Parke-Davis Pharm. Res., Div. Warner-Lambert Co., 2800 Plymouth Rd., Ann Arbor, MI 48105 USA

SO Free Radical Biology & Medicine, (1996) Vol. 21, No. 3, pp. 335-348. ISSN: 0891-5849.

DT General Review

LA English

AB Transcription factors/activators are a group of proteins that bind to specific consensus sequences (cis elements) in the promoter regions of downstream target/effector genes and transactivate or repress effector gene expression. The up- or downregulation of effector genes will ultimately lead to many biological changes such as proliferation, growth suppression, differentiation, or senescence. Transcription factors are subject to transcriptional and posttranslational regulation. This review will focus on the redox (reduction/oxidation) regulation of

transcription factors/activators with emphasis on p53, AP-1, and **NF-kappa-B**. The ~~redox~~ regulation of transcriptional activators occurs through highly conserved cysteine residues in the DNA binding domains of these proteins. In vitro studies have shown that reducing environments increase, while oxidizing conditions inhibit sequence-specific DNA binding of these transcriptional activators. When intact cells have been used for study, a more complex regulation has been observed. Reduction/oxidation can either up- or downregulate DNA binding and/or transactivation activities in transcriptional activator-dependent as well as cell type-dependent manners. In general, reductants decrease p53 and **NF-kappa-B** activities but dramatically activate AP-1 activity. Oxidants, on the other hand, greatly activate **NF-kappa-B** activity. Furthermore, redox-induced biochemical alterations sometimes lead to change in the biological functions of these proteins. Therefore, differential regulation of these transcriptional activators, which in turn, regulate many target/effector genes, may provide an additional mechanism by which small antioxidant molecules play protective roles in anticancer and antiaging processes. Better understanding of the mechanism of redox regulation, particularly in vivo, will have an important impact on drug discovery for chemoprevention and therapy of human diseases such as cancer.

CC Cytology and Cytochemistry - Human \*02508  
Genetics and Cytogenetics - Human \*03508  
Biochemical Studies - Nucleic Acids, Purines and Pyrimidines 10062  
Replication, Transcription, Translation \*10300  
Biophysics - Molecular Properties and Macromolecules \*10506  
Endocrine System - General \*17002  
Neoplasms and Neoplastic Agents - Pathology; Clinical Aspects; Systemic Effects \*24004

BC Hominidae \*86215

IT Major Concepts  
Biochemistry and Molecular Biophysics; Cell Biology; Endocrine System (Chemical Coordination and Homeostasis); Genetics; Molecular Genetics (Biochemistry and Molecular Biophysics); Oncology (Human Medicine, Medical Sciences)

IT Miscellaneous Descriptors  
CANCER; CHEMOPREVENTION; DNA BINDING; NUCLEAR FACTOR KAPPA-B

ORGN Super Taxa  
Hominidae: Primates, Mammalia, Vertebrata, Chordata, Animalia

ORGN Organism Name  
human (Hominidae)

ORGN Organism Superterms  
animals; chordates; humans; mammals; primates; vertebrates

L6 ANSWER 4 OF 4 HCAPLUS COPYRIGHT 2000 ACS  
AN 1995:677972 HCAPLUS  
DN 123:101823  
TI Oxidative stress, HIV and aids: The basis for antioxidant-oriented antiretroviral nucleoside analogs  
AU Abou-Shaaban, Rafiq R. A.  
CS College Pharmacy, King Saud University, Riyadh, 11451, Saudi Arabia  
SO Saudi Pharm. J. (1995), 3(1-2), 1-22  
CODEN: SPJOEM; ISSN: 1319-0164  
DT Journal; General Review  
LA English  
CC 1-0 (Pharmacology)  
Section cross-reference(s): 14, 15  
AB A review, with 186 refs. The HIV seropos. patients are under systemic and intracellular oxidative stress as a result of an excessive prodn. of reactive oxygen species (ROS) combined with the deficiencies of endogenous antioxidants such as glutathione (GSH), cysteine, vitamin E, carotenoids,

zinc-, manganese-contg. superoxide dismutase (Mn-SOD), selenium-contg. GSH peroxidase and catalase in the T-cell subsets. The different sources of ROS in AIDS patients are the activated leukocytes, cytokines and drugs required to control HIV progression, assocd. infections and **cancers**. Several reports suggest the involvement of ROS activated cytoplasmic factors such as nuclear factor .kappa.B (NF-.kappa.B) and tumor necrosis factor .alpha. (TNF-.alpha.) in the regulation of HIV replication. Since the discovery of retroviral cause for AIDS, a wide variety of agents capable of **inhibiting** different sites of viral life cycle were discovered. These agents were found to possess diverse chem. structures and works on different viral or host targets. The viral targets are either specific enzymes (reverse transcriptase, protease or glucosidase) or viral processes (gene expression, viral binding or viral budding) which interfere with the viral multiplication. The retroviral reverse transcriptase has been a popular target for the design and synthesis of anti-HIV drugs. Recent studies have focused on an intracellular target, the NF-.kappa.B, whose stimulation is related to the lowering of the endogenous antioxidant defense system and stimulation of the HIV expression. In spite of the myriad of known synthetic and/or natural **inhibitors** of HIV over the last decade, the AIDS virus still successfully elude all forms of curative therapy. Replenishing antioxidants will have a preventive role in different stages of AIDS disease, assocd. infections and **cancers**. The beneficial effect of **free radical** scavengers depend on biol. compatibility, the dosage used and the appropriate delivery systems that will allow the scavenger to act at the cellular and tissue sites where the **free radicals** are interfering with the normal function and causing injury. In this report, the author wishes to review the justification for a novel anti-AIDS class "Antioxidant-oriented Antiretroviral Nucleoside Analogs" that might provide curative therapy. These drugs will act by **inhibiting** both the reverse transcriptase viral target and host-mediated stimulation of viral replication. Accordingly, the prospective compds. will block the formation of provirus, extend the latency, after HIV integration into host genome, and **inhibit** viral expression. The required structural specification will be discussed. In addn. the pos. effects of the prospective drugs that might lead to the curative therapy are also outlined.

ST review HIV AIDS antioxidant retrovirus nucleoside  
IT Antioxidants  
Oxidative stress, biological  
Virucides and Virustats  
(oxidative stress, HIV and aids and basis for antioxidant-oriented antiretroviral nucleoside analogs)

IT Nucleosides, biological studies  
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(oxidative stress, HIV and aids and basis for antioxidant-oriented antiretroviral nucleoside analogs)

IT Virus, animal  
(human immunodeficiency 1, oxidative stress, HIV and aids and basis for antioxidant-oriented antiretroviral nucleoside analogs)

L8 ANSWER 1 OF 4 HCAPLUS COPYRIGHT 2000 ACS DUPLICATE 1  
 AN 1999:100268 HCAPLUS  
 DN 130:294707  
 TI The nuclear factor- $\kappa$ B RelA transcription factor is constitutively  
 activated in human pancreatic adenocarcinoma cells  
 AU Wang, Weixin; Abbruzzese, James L.; Evans, Douglas B.; Larry, Lillie;  
 Cleary, Karen R.; Chiao, Paul J.  
 CS Departments of Surgical Oncology, The University of Texas M. D. Anderson  
 Cancer Center, Houston, TX, 77030, USA  
 SO Clin. Cancer Res. (1999), 5(1), 119-127  
 CODEN: CCREF4; ISSN: 1078-0432  
 PB American Association for Cancer Research  
 DT Journal  
 LA English  
 CC 14-1 (Mammalian Pathological Biochemistry)  
 Section cross-reference(s): 3  
 AB Pancreatic adenocarcinoma is a leading cause of adult **cancer**  
 mortality in the United States. Recent studies have revealed that point  
 mutation of the K-ras **oncogene** is a common event in pancreatic  
**cancer**, and oncogenesis mediated by Ras may also involve  
 activation of Rel/nuclear factor (NF)- $\kappa$ B  
 transcription factors. Furthermore, the c-rel member of Rel/NF  
 - $\kappa$ B transcription factor family was first  
 identified as a cellular homolog of the v-rel **oncogene**,  
 suggesting that other members of the Rel/NF- $\kappa$ B  
 family are potentially oncogenes. We therefore investigated the  
 possibility that Rel/NF- $\kappa$ B  
 transcription factors are activated in pancreatic **cancer**.  
 Immunohistochem. anal., Western blot and Northern blot anal.,  
 electrophoretic mobility shift assays, and chloramphenicol  
 acetyltransferase assays were performed to det. RelA activity in human  
 pancreatic adenocarcinomas and normal tissues and nontumorigenic or  
 tumorigenic cell lines. RelA, the p65 subunit of NF- $\kappa$ B,  
 was constitutively activated in .apprx.67% (16  
 of 24) of pancreatic adenocarcinomas but not in normal pancreatic  
 tissues.  
 Constitutive RelA activity was also detected in 9 of 11 human pancreatic  
 tumor cell lines but not in nontumorigenic Syrian golden hamster cell  
 lines. I. $\kappa$ B.alpha., a previously identified NF- $\kappa$ B-  
 inducible gene, was overexpressed in human  
 pancreatic tumor tissues and cell lines, and RelA activation could be  
 inhibited by curcumin and dominant-neg. mutants of I. $\kappa$ B.alpha., raf,  
 and MEKK1. This is the first report demonstrating constitutive  
 activation  
 of RelA in nonlymphoid human **cancer**. These data are consistent  
 with the possibility that RelA is constitutively activated by the  
 upstream  
 signaling pathway involving Ras and mitogen-activated protein kinases in  
 pancreatic tumor cells. Constitutive RelA activity may play a key role  
 in  
 pancreatic tumorigenesis through activation of its downstream target  
 genes.  
 ST nucleus factor kappaB RelA subunit activation pancreas adenocarcinoma  
 IT Genes (animal)  
 RL: BOC (Biological occurrence); BPR (Biological process); BIOL  
 (Biological study); OCCU (Occurrence); PROC (Process)  
 (I. $\kappa$ B.alpha.; nuclear factor- $\kappa$ B RelA transcription factor  
 is

constitutively activated in human pancreatic adenocarcinoma cells)

IT NF-.kappa.B  
 RL: BAC (Biological activity or effector, except adverse); BOC  
 (Biological  
 occurrence); BIOL (Biological study); OCCU (Occurrence)  
 (RelA subunit; nuclear factor-.kappa.B RelA transcription factor is  
 constitutively activated in human pancreatic adenocarcinoma cells)

IT DNA  
 RL: BPR (Biological process); BIOL (Biological study); PROC (Process)  
 (RelA-DNA binding; nuclear factor-.kappa.B RelA transcription factor  
 is  
 constitutively activated in human pancreatic adenocarcinoma cells)

IT ras gene (animal)  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (involving in upstream signaling pathway; nuclear factor-.kappa.B RelA  
 transcription factor is constitutively activated in human pancreatic  
 adenocarcinoma cells)

IT Pancreatic adenocarcinoma  
 (nuclear factor-.kappa.B RelA transcription factor is constitutively  
 activated in human pancreatic adenocarcinoma cells)

IT Signal transduction (biological)  
 (upstream signaling pathway; nuclear factor-.kappa.B RelA  
 transcription  
 factor is constitutively activated in human pancreatic adenocarcinoma  
 cells)

IT 142243-02-5, Mitogen-activated protein kinase  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (involving in upstream signaling pathway; nuclear factor-.kappa.B RelA  
 transcription factor is constitutively activated in human pancreatic  
 adenocarcinoma cells)

RE.CNT 52

RE

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L8 ANSWER 2 OF 4 HCAPLUS COPYRIGHT 2000 ACS DUPLICATE 2  
 AN 1997:276623 HCAPLUS  
 DN 126:328888  
 TI Down-regulation of NF-.kappa.B activity and NF-.kappa.B p65 subunit expression by ras and polyoma middle T oncogenes in human colonic Caco-2 cells  
 AU Cadoret, Axelle; Bertrand, France; Baron-Delage, Sophie; Levy, Peggy; Courtois, Gilles; Gespach, Christian; Capeau, Jacqueline; Cherqui, Gisele  
 CS Laboratoire Biologie Cellulaire, Faculte Medecine Saint-Antoine, INSERM U 402, Paris, 75571, Fr.  
 SO Oncogene (1997), 14(13), 1589-1600  
 CODEN: ONCNES; ISSN: 0950-9232  
 PB Stockton  
 DT Journal  
 LA English  
 CC 14-1 (Mammalian Pathological Biochemistry)  
 Section cross-reference(s): 3  
 AB The products of ras and src proto-oncogenes are frequently activated in a constitutive state in human colorectal **cancer**. In this study the authors attempted to establish whether the tumorigenic progression induced by oncogenic activation of p21ras or pp60c-src in human colonic cells is assocd. with alterations of the activity and expression of nuclear factor .kappa.B (NF-.kappa.B), a transcription factor suspected to participate in the development of **cancer**. To this end, the authors used Caco-2 cells made highly tumorigenic by transfection with an activated Val-12 human Ha-ras gene or with the polyoma middle T (PyMT) **oncogene**, a constitutive activator of pp60c-src tyrosine kinase activity. Compared with control vector-transfected Caco-2 cells, both **oncogene**-transfected cell lines exhibited: (i) decreased constitutive NF-.kappa.B DNA-binding activity and NF-.kappa.B -mediated reporter gene expression, without alteration of their response to TNF-.alpha. for activation of these parameters; (ii) reduced NF-.kappa.B cytosolic stores along with a decreased p65 expression due, at least in part, to destabilization of p65 mRNA; (iii) a decrease in adhesion to extracellular matrix component-coated substrata which was partially cor. when stimulating NF-.kappa.B transcriptional activity with TNF-.alpha.. These results indicate that the tumorigenic progression induced by oncogenic p21ras or PyMT/pp60c-src in human colonic Caco-2 cells is assocd. with a down-regulation of p65 expression and NF-.kappa.B activity which could be responsible for the reduced adhesive properties of these cells after **oncogene** transfection.  
 ST ras src colon cancer NFkappaB expression; T antigen colon cancer NFkappaB expression

IT Cell adhesion  
Colon adenocarcinoma  
Extracellular matrix  
Gene expression  
Polyomavirus  
Transcription regulation  
(down-regulation of NF-.kappa.B activity and NF-.kappa.B p65 subunit expression by ras and polyoma middle T (pp60c-src activator) oncogenes in human colonic Caco-2 cells in relation to TNF-.alpha. and extracellular matrix adhesive properties)

IT Middle T antigen  
Oncogenes (microbial)  
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)  
(down-regulation of NF-.kappa.B activity and NF-.kappa.B p65 subunit expression by ras and polyoma middle T (pp60c-src activator) oncogenes in human colonic Caco-2 cells in relation to TNF-.alpha. and extracellular matrix adhesive properties)

IT c-Ha-ras gene (animal)  
p21c-Ha-ras protein  
RL: ADV (Adverse effect, including toxicity); BOC (Biological occurrence);  
BIOL (Biological study); OCCU (Occurrence)  
(down-regulation of NF-.kappa.B activity and NF-.kappa.B p65 subunit expression by ras and polyoma middle T (pp60c-src activator) oncogenes in human colonic Caco-2 cells in relation to TNF-.alpha. and extracellular matrix adhesive properties)

IT Tumor necrosis factor .alpha.  
RL: BAC (Biological activity or effector, except adverse); BIOL (Biological study)  
(down-regulation of NF-.kappa.B activity and NF-.kappa.B p65 subunit expression by ras and polyoma middle T (pp60c-src activator) oncogenes in human colonic Caco-2 cells in relation to TNF-.alpha. and extracellular matrix adhesive properties)

IT NF-.kappa.B  
RL: BOC (Biological occurrence); BPR (Biological process); BIOL (Biological study); OCCU (Occurrence); PROC (Process)  
(down-regulation of NF-.kappa.B activity and NF-.kappa.B p65 subunit expression by ras and polyoma middle T (pp60c-src activator) oncogenes in human colonic Caco-2 cells in relation to TNF-.alpha. and extracellular matrix adhesive properties)

IT mRNA  
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)  
(down-regulation of NF-.kappa.B activity and NF-.kappa.B p65 subunit expression by ras and polyoma middle T (pp60c-src activator) oncogenes in human colonic Caco-2 cells in relation to TNF-.alpha. and extracellular matrix adhesive properties)

IT Phospholipoproteins  
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)  
(pp60c-src; down-regulation of NF-.kappa.B activity and NF-.kappa.B p65 subunit expression by ras and polyoma middle T (pp60c-src activator) oncogenes in human colonic Caco-2 cells in relation to TNF-.alpha. and extracellular matrix adhesive properties)

IT 141588-29-6, Protein pp60c-src kinase  
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)  
(down-regulation of NF-.kappa.B activity and NF-.kappa.B p65 subunit expression by ras and polyoma middle T (pp60c-src activator) oncogenes in human colonic Caco-2 cells in relation to TNF-.alpha. and extracellular matrix adhesive properties)

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SO Semin. Cancer Biol. (1997), 8(2), 103-111  
CODEN: SECBE7; ISSN: 1044-579X

PB Academic

DT Journal; General Review

LA English

CC 14-0 (Mammalian Pathological Biochemistry)

AB A review with 103 refs. Rel/NF-.kappa.B  
transcription factors play fundamental roles in the immune system. These  
structurally-related proteins share common pathways of activation that  
involve their release from inhibitory I.kappa.B factors in response to  
stimuli. Accumulating evidence also points to a role for Rel and  
I.kappa.B proteins in cellular growth control and oncogenesis. The  
rearrangement and amplification of genes encoding Rel/NF-.  
kappa.B and I.kappa.B proteins in several human  
cancers, together with the acute oncogenicity of the retroviral  
v-rel oncogene in birds and mammals, suggests a correlation  
between their effects on gene expression and their role in malignancy.  
This review focuses on the current status of the assocn. of Rel/NF  
-.kappa.B and I.kappa.B proteins with neoplastic cell  
transformation in vitro and in vivo.

ST review tumor transformation transcription IkappaB RelNFkappaB

IT Transcription factors  
RL: ADV (Adverse effect, including toxicity); BPR (Biological process);  
BIOL (Biological study); PROC (Process)  
(I.kappa.B; Rel/NF-.kappa.B and I.kappa.B factors in oncogenesis)

IT Transformation (neoplastic)  
(Rel/NF-.kappa.B and I.kappa.B factors in oncogenesis)

IT NF-.kappa.B  
Transcription factors  
RL: ADV (Adverse effect, including toxicity); BPR (Biological process);  
BIOL (Biological study); PROC (Process)  
(Rel; Rel/NF-.kappa.B and I.kappa.B factors in oncogenesis)

L8 ANSWER 4 OF 4 MEDLINE

AN 92069087 MEDLINE

DN 92069087

TI Molecular mechanisms of transformation by the v-rel oncogene.

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NC CA-22443 (NCI)  
CA-07175 (NCI)

SO CRITICAL REVIEWS IN ONCOGENESIS, (1991) 2 (4) 293-309. Ref: 93  
Journal code: A1Y. ISSN: 0893-9675.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)  
General Review; (REVIEW)  
(REVIEW, ACADEMIC)

LA English

FS Priority Journals

EM 199203

AB Our knowledge of the molecular mechanisms that underlie the diverse  
cellular phenotypes collectively called **cancer** has increased  
dramatically over the past 20 years. A significant contribution to our  
current understanding of **cancer** has come from research into the  
behavior of a unique group of viruses, the acutely transforming  
retroviruses. The acutely transforming retroviruses contain one, or  
occasionally two, genes that are responsible for the transforming  
properties of the viruses. These genes, called retroviral oncogenes, have  
been transduced from genes present in the normal cellular genome, called  
proto-oncogenes. The proto-oncogenes encode diverse proteins that are  
important for the regulation of normal cell growth and differentiation.  
One such proto-oncogene, the c-rel proto-oncogene, has  
recently been shown to encode a member of the Nuclear Factor-kappa B (

NF-kappa B) transcription factor family. The structural and functional relationship between NF-kappa B and the c-rel protein provides a basis for understanding the molecular mechanism of neoplastic transformation by the v-rel protein.

CT Check Tags: Animal; Human; Support, U.S. Gov't, Non-P.H.S.; Support, U.S. Gov't, P.H.S.

\*Cell Transformation, Neoplastic: GE, genetics

\*NF-kappa B: GE, genetics

\*Oncogenes

\*Protein-Tyrosine Kinase: GE, genetics

Proto-Oncogenes

\*Retroviridae Proteins, Oncogenic: GE, genetics

Transcription, Genetic

CN EC 2.7.1.112 (Protein-Tyrosine Kinase); 0 (NF-kappa B); 0 (Oncogene Proteins v-rel); 0 (Retroviridae Proteins, Oncogenic)

GEN v-rel